

## PATENT SPECIFICATION



Application Date: Aug. 1, 1923. No. 19,660/23.

211,794

Complete Accepted: Feb. 28, 1924.

## COMPLETE SPECIFICATION.

## Improvements in or Applicable to Driving Chains.

I, JOSEPH HOWELL, Miner, of 21, Warrington Road, Hanley, Stoke-on-Trent, in the County of Stafford, British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

My invention relates to improvements in or applicable to driving chains for driving coal cutting machines and for other driving purposes, the object being to provide a very simple link connection for firmly securing the ends of the chain together.

Prior to the date of this invention the ends of driving chains for coal cutting machines and the like have been connected by a link formed of two side plates, one side plate having fixed studs thereon to take through holes in the other plate, the two plates being set apart and fixed firmly together by a slidable key having bevelled edges to engage an undercut groove in the face of the plate and through the end of each fixed stud. When in use the connecting key of such link sometimes becomes loose and the chain is often damaged thereby causing the coal cutter or other machine to stop.

My improved driving or haulage chain is designed with the two side plates coupled together so that there are no projections on the side plates of the connecting link.

My invention will be fully described with reference to the accompanying drawings in which,

Fig. 1 is a plan of the connecting end of a driving chain of the ordinary well known construction commonly employed for driving coal cutting machines, and

Fig. 2 is an elevation as seen from the back of Fig. 1.

In these figures X and X are the blocks which carry the usual cutter

boxes. The connecting link Y is composed of side plates  $y^2$  and  $y^3$ , the side plate  $y^2$  having fixed studs  $y^4$  passing through holes  $y^5$  in the blocks X. The end of each fixed stud  $y^4$  passes through a hole  $y^6$  in the detachable plate  $y^3$ , the said side plate  $y^3$  and also the ends of the studs  $y^4$  being slotted and undercut to accommodate a slidable key  $y^7$  which when in position lies across the two ends of the fixed studs  $y^4$  and extends nearly the full length of the detachable side plate. This form of connecting link is well known and will be understood.

My improved connecting link is illustrated at Figs. 3 to 6.

Fig. 3 is a plan of the connecting portion of my improved driving chain,

Fig. 4 illustrates two screws which will be herein referred to,

Fig. 5 is a sectional plan of the detachable side plate, and

Fig. 6 is a sectional plan of Fig. 3 with the detachable plate (Fig. 5) removed therefrom.

In the Figures 3 to 6 referred to, X X are the blocks which carry the usual cutter boxes, the improved link connection being shown at Y (Fig. 3).

The connecting link Y has two side plates  $y^2$  and  $y^3$  the plate  $y^2$  having studs  $y^4$  rivetted thereto whilst the ends of the said studs are bored and internally threaded at  $a$ , the outer end of such screwed hole being countersunk the fixed studs  $y^4$  pass through the blocks X and when the side plate  $y^3$  is in position the screws  $b$  (Fig. 4) are passed into the screwed holes  $a$  to firmly secure the side plate  $y^3$  firmly in position. This is accomplished without having any large projections beyond the face of the two side plates as shown at Fig. 3.

When it is desired to disconnect the chain the two screws  $b$  are removed when the side plate  $y^3$  can be taken away from the fixed studs  $y^4$ .

211,794 COMPLETE SPECIFICATION

74/254

(L)

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

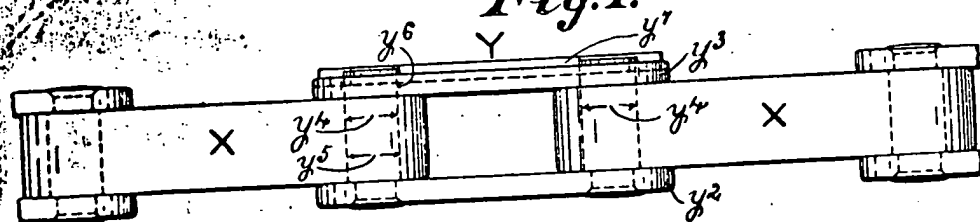


Fig. 2.

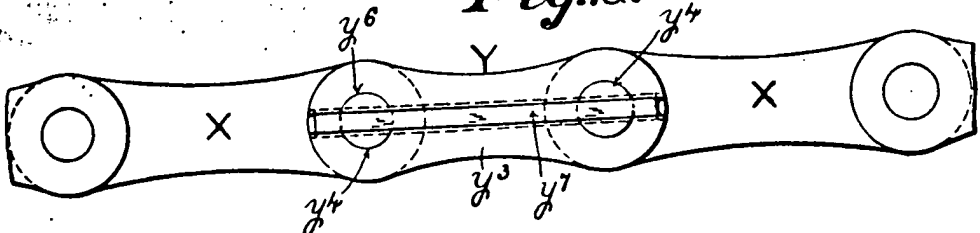


Fig. 3.

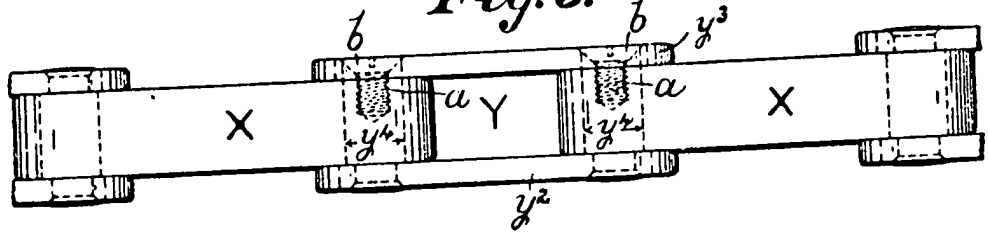


Fig. 4.

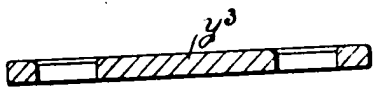


Fig. 5.

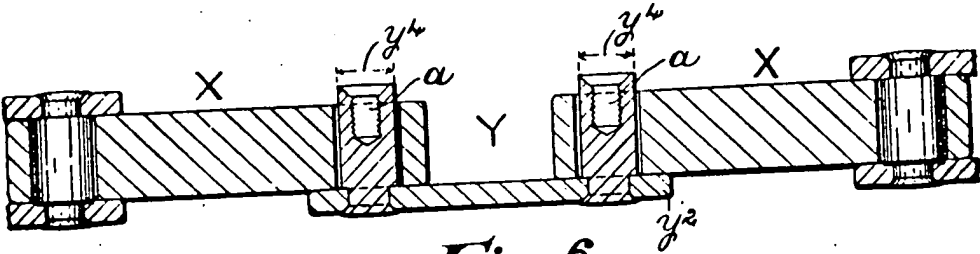


Fig. 6.